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**From:** Shore, Berry  
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**Subject:** Morning Clips: Lead In Drinking Issue

## **Lead in water still torments many schools**

March 26, 2016

NEW YORK Times |

(Photo: Schools across the country have made the switch to bottled water after continued problems with lead contamination in their drinking water. Many schools have removed their water fountains and coolers all together in an effort to limit students' exposure. at Sebring McKinley High School, where elevated levels of lead were found in the water in August, in Sebring, Ohio, Feb. 2, 2016. The Flint, Mich., water crisis has cast attention on the issue of lead in the water system , but in schools from Jersey City to Los Angeles, such problems have dragged on for years. (Ty Wright/The New York Times) Photo: TY WRIGHT, STR / NYTNS  
Photo: TY WRIGHT, STR )

JERSEY CITY, N.J. - Anxious parents may wonder how a major school system like Newark's could overlook lead in the drinking water of 30 schools and 17,000 students. The answer: It was easy. They had to look only a few miles away, at the century-old classrooms of the schools here, across the Hackensack River.

The Jersey City Public Schools district discovered lead contamination in eight schools' drinking fountains in 2006, and in more schools in 2008, 2010 and 2012. But not until 2013 did officials finally chart a comprehensive attack on lead, which by then had struck all but six schools.

This winter's crisis in Flint, Mich., has cast new attention on lead in water supplies. But problems with lead in school water supplies have dragged on for years - aggravated by ancient buildings and plumbing, prolonged by official neglect and tight budgets, and enabled by a gaping loophole in federal rules that largely exempts schools from responsibility for the purity of their water.

Children are at greatest risk from lead exposure, and school is where they spend much of their early lives. But cash-starved school administrators may see a choice between spending money on teachers or on plumbing as no choice at all.

"They feel it's almost better not to sample because you're better off not knowing," Marc Edwards, a Virginia Tech University civil engineering professor who has fought for lead safety nationwide, said in an interview.

### ***Under the rule***

The problem is persistent and widespread. Baltimore's public schools switched entirely to bottled water in 2007 because ripping out the lead plumbing would have been impractical. Sebring, Ohio, found elevated lead levels in August after workers had stopped adding an anti-corrosion chemical to the water supply.

The Los Angeles Unified School District allotted \$19.8 million in September to retrofit or remove its 48,000 drinking fountains to erase a small but tenacious lead threat. Ithaca, N.Y., schools switched temporarily to bottled water in January after water tests found elevated lead levels at two schools.

Congress could easily have cracked down on lead in schools. In fact, it once did. The 1988 Lead Contamination Control Act required schools to scrap lead-lined water coolers, test drinking water and remedy any contamination they found. But a federal appeals court struck down part of the law affecting schools in 1996. And while some states have devised their own lead-testing rules, federal lawmakers have yet to revisit the issue.

The only regulation left is a 1991 rule by the federal Environmental Protection Agency requiring periodic tests for lead and copper by most public water systems, whether the supplier is a big utility or a well in a trailer park or campground.

But although schools and day care centers are the main sources of water for children on most weekdays, only the few schools that operate their own wells fall under the rule. The vast majority of schools use treated water from utilities.

And while the utilities test their water, virtually all lead contamination occurs inside schools - in lead pipes, water-cooler

coils and linings, and in leaded-metal fountains and taps.

"If you're a mom-and-pop coffee shop in Sparta, N.J., and have a private well, you're required to certify every quarter," said Robert Barrett, chief executive of Aqua Pro-Tech Laboratories, a New Jersey environmental testing laboratory. "But if you're a school, you don't have to do anything."

### ***Above the threshold***

The Centers for Disease Control and Prevention says children whose blood lead content exceeds 5 micrograms per deciliter - 50 parts per billion, or less than a millionth of an ounce in a pint - should see a doctor. High blood lead levels can stunt a child's mental development and damage a range of organs. But even smaller amounts can affect children's intellectual development, and the agency says no level of lead is safe.

The EPA's 1991 lead rule - the one that requires most public water systems to periodically test for lead and copper - limits the amount of lead in drinking water to no more than 15 parts per billion. The rule is being revised, though, and that limit could soon be lowered. Even though the rule does not apply to most schools, districts that do monitor drinking water generally use it as a guideline.

In Jersey City, the public schools are classic candidates for a lead problem. Two-thirds are more than 80 years old, and a third are more than a century old. The system had been under state control since 1989 because of poor management and low test scores; only recently, with Marcia Lyles as the superintendent, did the state agree to return control to local officials.

Jersey City taps and fountains went untested until the EPA took samples in 2006, again part of the federal outreach program, and turned up lead concentrations up to 60 times the federal threshold at eight schools. Not until early 2008, after more tests found fresh contamination at six of the schools, did the superintendent at the time, Charles Epps, switch those students to bottled water.

Jersey City's mayor then, Jerramiah Healy, declared the matter closed. "We believe this is a situation that is isolated to the affected schools and to certain water fountains within those schools," The Jersey Journal newspaper quoted him as saying.

Healy was wrong. The district tested all its fountains and taps in mid-2008 and found that water in 27 more schools was as much as 80 times higher than the EPA's lead threshold. Under pressure from advocates, the district tested selected water sources at 38 buildings in 2010 and found yet more lead. In a 98-year-old school, Nicolaus Copernicus Elementary, 16 of 19 water fountains and coolers were found above permissible levels.

That school and some others were switched to bottled water, and fountains and taps were turned off. But that was not the end.

A 2013 retest of all 2,000-plus water sources found yet more contamination, including one fountain whose water tested 853 times the accepted maximum. Among those water sources were 10 in prekindergarten classes where daily tooth brushing was part of the regimen.

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### **EPA delay in releasing danger level for lead in water raises questions**

Alison Young

2:19 p.m. EDT March 26, 2016

USA Today

Nearly a year ago, officials from the U.S. Environmental Protection Agency said work was underway to create a health-hazard standard for lead in drinking water, records from agency advisory group meetings show.

Yet despite growing public concern about high levels of lead coming out of taps in Flint, Mich., as well as at homes and schools in all 50 states, the EPA still hasn't released results of computer models estimating what level of lead in water poses a serious health threat and should trigger local health department help for families.

"People across the country and in Flint need to know what EPA thinks the level is at which a household should consider

taking action,” said Tom Neltner, a member of the EPA’s lead and copper work group and chemicals policy director for the Environmental Defense Fund.

“I think it’s stuck within the EPA decision-making,” Neltner said. “I think they have it. I think they are arguing about it.”

Beyond Flint: Excessive lead levels found in almost 2,000 water systems across all 50 states

EPA officials declined to grant an interview and did not answer USA TODAY NETWORK questions about why the analysis is taking so long and what deadlines agency leadership has set to ensure timely progress.

“EPA is analyzing data on lead exposure, blood lead level models and exposure pathways,” the agency said in an emailed statement. “Once the agency has a scientifically robust analysis, and completes internal agency reviews, we intend to seek external peer review.”

“Right now people are using the current action level as if it had meaning for health, even though it is not based on health,” Tom Neltner, Environmental Defense Fund

The EPA hasn’t begun an internal review yet because, among other things, it still is evaluating approaches that at least five offices within the agency use for predicting a person’s blood-lead level based on exposures, the statement said. The goal is for the level to be included in a package of regulatory proposals the agency expects to publish sometime in 2017.

Current EPA regulations do not include a health-hazard standard for lead in drinking water. In regulating water systems, the EPA has set what it calls an “action level” for lead of 15 parts per billion to trigger water-treatment actions if more than 10% of faucets sampled exceed that level.

But the number is only an engineering standard that, when it was set in 1991, was considered to be the lowest amount of lead in water that systems could achieve reliably through adding anti-corrosion chemicals.

“Right now people are using the current action level as if it had meaning for health, even though it is not based on health,” Neltner said

Some studies have documented harm from drinking water contaminated at far lower levels. The EPA and the federal Centers for Disease Control and Prevention both say lead in drinking water is not safe at any concentration.

Lead taints drinking water in hundreds of schools, day cares across USA

The EPA has set a maximum contaminant goal of zero for lead in drinking water. The goal is not enforceable, and experts say it also is impossible to achieve because millions of U.S. homes receive water that passes through lead pipes and plumbing.

Without a health-hazard level, the public and water systems can’t put lead test results in any context or know when immediate action is needed, said Marc Edwards, the Virginia Tech water engineering expert whose team has independently investigated Flint’s contamination issues.

“You have to have some level that requires people to know when their health is in danger,” Edwards said. “Whatever they set, I think they’re fearful of the fallout.

"People are measuring lead in schools again, and they’re getting levels in the hundreds of parts per billion,” he said.

This month, a USA TODAY NETWORK investigation revealed that nearly 2,000 water systems serving about 6 million people have failed to meet the EPA’s existing lead standard since 2012. About 350 of the failing systems are dedicated to serving schools and day care centers, and about 600 of the systems had tests at some taps showing lead levels topping 40 ppb, EPA enforcement data show.

"Your series has really driven it home, more so than anyone else, how widespread this problem is," Edwards said. "EPA has to make a decision about some level of contamination that poses a health threat."

Meeting minutes from an EPA drinking water expert advisory group indicate agency staff made progress coming up with a health hazard number last year and thought it might even be released by late 2015.

As of this past April, EPA staff told the lead and copper working group that the agency had an existing computer model to help determine what level of lead in a home's tap water posed a serious health risk. Joyce Donohue of EPA's Office of Science and Technology discussed factors that would need to be considered in the modeling.

At that time, the working group was in the process of drafting recommendations for creation of a household action level for lead.

The group's recommendation was for the EPA to come up with a level of lead in drinking water that posed a health danger to those considered.

"EPA has to make a decision about some level of contamination that poses a health threat."

Marc Edwards, Virginia Tech

At greatest risk were infants fed formula made with tap water, the group said. The modeling should establish a hazard level that would protect them from having dangerous levels of lead in their blood.

If a water test found lead above this household action level, the group wanted public health experts notified so they could investigate and help.

In June, records show that members asked about the EPA's progress in developing a household action level, which EPA officials dubbed HAL.

Eric Burneson of the EPA's Office of Ground Water and Drinking Water "indicated that EPA is working on establishing the HAL, but that it will take some time because the HAL must undergo a peer review and quality assurance. It may or may not be available for the full (advisory council) meeting in late 2015." Burneson is the director of the water office's standards and risk management division.

"Nine months ago, EPA said it needed to complete quality assurance and peer review before releasing a draft household action level," Neltner said.

But he said he believes that the EPA has an obligation as a public health agency to release

How much lead in water poses an imminent threat?

"It makes no sense to wait for rulemaking to help parents who must decide whether to invest in a filter for the water they use to make up their child's infant formula," he said.

The lead and copper working group is part of the EPA's National Drinking Water Advisory Council, which in December formally sent numerous recommendations to the agency, including for the creation of the household action level. Jill Jonas, advisory council chairwoman and the drinking water chief for the Wisconsin Department of Natural Resources, declined to be interviewed.

Several of the experts who served on the advisory council's 16-member lead and copper working group were traveling, unavailable or declined to be interviewed.

June Swallow of the Rhode Island Department of Health said through a spokesperson that she doesn't recall the EPA committing to a particular time frame for developing the health-action level. Evaluating how long it should take "is not her area of expertise," she said.

Leon Bethune of the Boston Public Health Commission, declined to be interviewed about the EPA's progress developing the action level. Through a spokesperson, he issued a statement: "It was a great experience meeting with the folks from health departments and water utilities from around the country, using our own experiences, knowledge and research to come to consensus on how to improve the lead and copper rule."

Another working group member, Lynn Thorp of the advocacy group Clean Water Action, said in an interview the EPA indicated last year that agency staff were working to create the household-action level.

“I don’t know why it hasn’t come out yet,” Thorp said. “If there is a gap in public health and exposure science or other data that we need to answer this question, then we need to know that so there can be public support for government agencies undertaking that work.”

How much lead in water poses an imminent threat?

From at least 2002 into 2004, archived webpages show the EPA’s website said a lead concentration of 40 ppb or more in drinking water was cause for "immediate action." At that level, the water posed an “imminent and substantial endangerment to the health of children and pregnant women.”

The agency acknowledged the level was on its website for several years but told the USA TODAY NETWORK it never was formally adopted and hadn’t undergone peer review. The EPA removed references to the 40 ppb hazard level during an earlier lead-contaminated water crisis in the District of Columbia.

Read the USA TODAY NETWORK's "Beyond Flint" investigation of lead contamination in water nationwide at [lead.usatoday.com](http://lead.usatoday.com)

Follow investigative reporter Alison Young on Twitter: [@alisonannyoung](https://twitter.com/alisonannyoung)

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## The Future for Flint’s Children

By MONA HANNA-ATTISHA

MARCH 26, 2016

Flint, Mich. — THE World Health Organization’s “action level” for lead contamination in drinking water — indicating the need for intervention — is 10 parts per billion. The Environmental Protection Agency’s action level is 15 parts per billion.

In tests of tap water in Flint., Mich., over the last six months, some 1,300 homes exceeded the E.P.A. action level. Thirty-two had levels above 1,000 parts per billion. And just this month, a sample showed a concentration as high as 11,846 parts per billion.

To understand the contamination of this city, think about drinking water through a straw coated in lead. As you sip, lead particles flake off into the water and are ingested. For almost two years, Flint’s children have been drinking water through lead-coated straws.

There are so many things wrong with this that it’s difficult to know what to address first. But since I called attention last year to an increase in children with elevated lead levels after the city changed its water supply, I’ve known that my focus had to be on the kids. One of my patients, a 2-year-old girl, recently came to the clinic for her checkup. Running around the room with her colorful gown flapping, she hopped onto the exam table, grabbed my stethoscope and placed it on her chest. I gently nudged it over her heart. “Can you hear anything?” Her eyes lit up, and she nodded.

Her mother turned to me, trying to hide her tears. She thought the water was safe, and why not? The authorities told her it was. She mixed her daughter’s baby formula with warm tap water. She got a filter only when the National Guard came to her door this year. Now she wonders, will her daughter be O.K.?

The same question can be asked about the more than 8,000 other children here under the age of 6 who drank lead-contaminated water.

Numerous epidemiologic studies of lead exposure in children, particularly those under the age of 6, indicate an increased risk for damage to cognition, behavior and employment prospects, also lower I.Q.s, poor impulse control and decreased lifetime earnings. Epigenetic research [suggests](#) that lead exposure in women can lead to DNA changes in their grandchildren. Their *grandchildren*.

And yet my little patient may be all right. Not every child exposed to lead will suffer the most severe consequences. Some will be fine, though the Centers for Disease Control and Prevention warns that there is no safe level of lead in a child.

Families here are traumatized; faith and trust in government have evaporated. State and federal agencies responsible for protecting them failed miserably. Much has been written about the roots of the Flint water crisis: misguided fiscal austerity, inequality, racism, environmental injustice, poverty, deindustrialization. These are all important and nationally relevant issues, but the focus now needs to turn to the future, and to healing.

We cannot wait to see the potential cognitive and behavioral consequences; we must act. Developmental neurobiology has taught us that adverse childhood experiences and toxic stress change the trajectory of a child's life in predictable ways.

But science also gives us hope. We can reduce the impact of these adversities, including lead exposure, when we wrap these children in evidence-based interventions to promote their development. These include maternal infant support and early literacy programs; universal preschool; school health services; nutrition programs; and primary medical care and mental health care. All vulnerable children need these interventions, but kids in Flint need them now, not next month or next year.

At the Pediatric Public Health Initiative, created by Michigan State University and Hurley Children's Hospital in response to this crisis, we are aiming to help Flint not only recover, but thrive. Flint is proud and resilient (it helped put America on wheels), but we can't do this alone.

Unfortunately, not enough money has been allocated for the long-term child development initiatives we need. Gov. Rick Snyder recently proposed a budget that would spend \$195 million on the lead problem here, including \$63 million for health-related programs and \$15 million for food and nutrition initiatives. I am hopeful that the State Legislature will enact these measures. But even this support would not address the full magnitude of this problem, which will continue throughout these children's lives. We must make a yearslong commitment.

We also need federal help, and much more than the \$220 million Congress is considering for water infrastructure and health-related services to communities nationwide. This is not a partisan issue; it is a humanitarian one.

Some will say we can't afford it. But our nation has never been reluctant to aid victims of hurricanes, tornadoes, floods or earthquakes. Shortsighted cost-cutting and willful bureaucratic blindness may have caused the calamity in Flint but the effect is no less than a huge natural disaster.

When I turn back to my patient's mother, I give her a hug. I remind her to keep using the water filter, give her daughter great nutrition, sign her up for preschool, read to her, sing to her, love her and be there for her. Her daughter has been exposed to lead-contaminated water for almost her entire life, during her most critical brain development. I don't have a magic pill that can take that away, but I do have a prescription for hope.

As she reaches for my stethoscope again, I tell her mom that she is going to be O.K. No, she'll be great. With the nation's help, we will heal. Because we are not a nation that can accept 11,846 parts per billion of lead in drinking water. Or the consequences for the children of Flint.

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## **Digging Further Into a Water Problem**

MARCH 26, 2016

NY Times

Cases of bottled water at Sebring McKinley Junior Senior High School in Sebring, Ohio, where lead was found in the water in August. Credit Ty Wright for The New York Times

While the water crisis in Flint, Mich., has focused attention on water safety, many of the country's 13,500 public school districts take the purity of their water for granted, experts say. Yet lead contamination has been found in schools nationwide.

Michael Wines, Patrick McGeehan and John Schwartz, who have been writing about water safety for The New York Times, recently discussed some of what they have found in their reporting. Here is an excerpt from their conversation:

**JOHN SCHWARTZ:** One of the frustrating things about federal regulations on water safety is that they apply only to exactly what they apply to — that is, they extend only as far as their enabling legislation allows. In the case of regulating drinking water, the regulations generally apply to suppliers of water, like your town water plant. When Congress tried to stretch the rules to apply them to schools through the Lead Contamination Control Act, the federal courts said the federal government could not order the states around that way. Congress has not done anything on the issue since then, so compliance with the Lead Contamination Control Act is voluntary. And so it's not surprising that things slip through the cracks.

**PATRICK MCGEEHAN:** Still, John, many people seem taken aback to learn that there is no mandatory testing of water in schools. They may have had a false sense of security because they receive regular reports on the results of water testing in their towns. But those results may not include any schools. Momentum is building for change, though. In New Jersey, legislators are already calling for a law to make sure the water in schools gets tested for lead.

**SCHWARTZ:** It really is hard to assign responsibility or blame for the problem. Is it the federal E.P.A., state or city regulators, or school district officials? I might just go a little weaselly here and say “all of the above.” There's no part of the system that hasn't failed our kids when it comes to lead even though the laws have done a tremendous amount to remove lead from our environment — from gasoline, from paint, from plumbing fixtures. What's left can be chalked up to a failure of will at every level, with occasional crises that can place the blame more on one link in the chain than another.

**MICHAEL WINES:** I'd add our political leaders to the list. Efforts to rid our homes and water of lead have lost government support and money in the last decade as so-called discretionary spending has been slashed from the federal budget. We don't even properly track lead levels in adults anymore. The federal government stopped funding state grants for adult lead surveillance in 2013, and though it has restored part of the money, at least 13 states have stopped collecting data. Some of the 28 that still do collect data help pay for it with money from federal grants that are meant for other lead programs.

**SCHWARTZ:** Another issue is so-called environmental injustice — concerns that officials ignore complaints about the water supply from poorer minority communities. In Flint, a report by an independent task force focused on these concerns. They are part of the story of the problems in school districts, but not the whole story. As our story shows, some new schools have shown up with lead problems, too, because the school districts paid higher prices for brass plumbing fittings that contained lead.

**MCGEEHAN:** I have been struck by how genuinely disappointed scientific experts seem with the response, or lack thereof, from government officials who have seen data showing high lead levels. Over and over, I heard that little or no action was taken after tests showed alarmingly high levels of lead in water that kids are ingesting on a daily basis.

**SCHWARTZ:** What about adults? There is no safe level of lead, and each of us grown-ups probably has fewer I.Q. points than we would have if there wasn't lead in the environment when we were kids. I wonder how much better off we'd be if we'd gotten the lead out earlier, and more effectively. Remember that lead also has been linked to behavior problems, including impulse control and aggression.

**WINES:** All of us probably do have lead in our bodies, John, and there used to be a lot more. Back in 1976, when leaded gasoline was still the norm, the lead blood level for an average American was 12.8 micrograms per deciliter. By today's standards, that's shockingly high. More recent data, from 2009 and later, put the level at 1.2 micrograms for adults and 1.8 for kids, who are far more vulnerable to lead's effects than grown-ups. Some of the danger does decline with age; infants and toddlers are at greatest risk.

So aren't the adults who were kids in the 1970s largely productive members of society today? Well, yes, but that doesn't mean they wouldn't have been even more productive without so much lead in their bodies. Check out this study, which concludes that kids with a lead blood level above 7.5 micrograms have “significantly greater” intellectual deficits than kids below 7.5. Or this one, which blames blood-lead levels between 5 and 9 micrograms for a stunning share of failing grades in reading and math by Chicago third-graders. Many of us who were toddlers then are slightly dimmer bulbs, I.Q.-wise, than we would have been if we hadn't been sucking in gas fumes.

MCGEEHAN: When you discuss even relatively low levels of lead with water-testing experts, their facial expressions and tones of voice tell you right away that there is cause for concern. If they're worried, we all should be.

WINES: But don't dwell on the past. Blood levels of lead not wildly far from the current national average are linked to heart troubles, clogged arteries, premature births, kidney disease and other nasty stuff. Add to that the social and financial cost we're all paying for the unfortunate fraction of kids who really do have high blood-lead levels — mostly minorities and immigrants in poor neighborhoods. They will pay stiffer costs as adults in lost intellectual capacity, and a number of studies suggest that at least some violence by young men is tied to high levels of lead in babyhood.

MCGEEHAN: I am now dubious about the quality of the water my sons consumed at their suburban public schools. The data on our town's water samples look fine, but it is possible that they do not reflect the situation in the schools. Some of those buildings are quite old, and that can create a problem. I'm now relieved when I see my sons and their schoolmates carrying bottled water, no matter the cost.

SCHWARTZ: This morning my New Jersey town sent a note to parents promising to share all testing information and stating that the most recent tests, in 2013, had shown no lead contamination. Parents should demand that information — and if there's any doubt at all, send kids to school with a water bottle clipped to the backpack. But I'm no fan of bottled water, which creates waste problems and costs too much.

MCGEEHAN: I have occasionally sent my younger son off with a reusable one filled from the tap. But I probably won't do that anymore, landfills be damned.

SCHWARTZ: By water bottle, Patrick, I meant that having your kids carry around a reusable bottle is a good idea, filled from the tap at home if you are comfortable with your own water supply. I just don't like the disposable water bottles. Not that I want to start a huge argument or anything, but there were two million tons of plastic water bottles in landfills in 2005! Only 13 percent of plastic bottles get recycled. And the water isn't necessarily any better than tap water, notes the Natural Resources Defense Council. Just sayin'.